CLAIMS RELATED TO THE INVENTION

I claim:

1. A recessed light assembly adapted to use motion detector(s) tuned to detect human and/or animal motion and consequently turn the recessed light on, the recessed light assembly comprising:

a housing canister for recessed light and further comprising means of mounting said housing to structural elements;

a decorative trim (bezel) with apertures for electric lamp and motion detector mechanism, and configured to fit with said recessed light assembly;

one or more motion detector(s), each disposed along an aperture in said decorative trim and comprising:

radiation sensors;

radiation bandwidth filtration mechanism;

means to focus radiation over radiation sensors; and

logic circuits;

an electrical socket frame comprising an electrical lamp socket, disposed over said decorative trim, and designed to fit within the housing canister of said recessed lighting assembly; and

electrical cabling designed to place motion detector(s) between source line voltage and electric lamp socket in recessed light assembly.

2. A recessed light assembly as claimed in Claim 1, and further comprising:

an ambient light detection mechanism that is designed to prevent electrical power from being applied to electric lamp recited in Claim 1 when a configurable amount of ambient light, the term configurable encompassing the range between there being no configurability at all to a configurability to a certain level of sensitivity to infrared radiation changes, is present.

3. A recessed light assembly as claimed in Claim 1, and further comprising:

a timer that, after a configurable period of time, the term configurable encompassing the range between there being no configurability at all to a configurability to certain number of seconds, disconnects electrical power being applied to electric lamp recited in Claim 1.

4. A recessed light assembly as claimed in Claim 1, and further comprising:

an ambient light detection mechanism that prevents electrical power from being applied to electric lamp recited in Claim 1 when a configurable amount of ambient light, the term configurable encompassing the range between there being no configurability at all to a configurability to a certain level of sensitivity to infrared radiation changes, is present; and

a timer that, after a configurable period of time, the term configurable encompassing the range between there being no configurability at all to a configurability to certain number of seconds, disconnects electrical power being applied to electric lamp recited in Claim 1.

5. A recessed light assembly as claimed in Claim 1, albeit without the housing canister recited in Claim 1, the resulting subassembly so designed as to fit and retain itself into a matching recessed light housing canister.

6. A recessed light assembly as claimed in Claim 1, albeit without the housing canister recited in Claim 1, the resulting subassembly so designed as to fit and retain itself into a matching recessed light housing canister, the resulting subassembly further comprising:

an ambient light detection mechanism that prevents electrical power from being applied to electric lamp recited in Claim 1 when a configurable amount of ambient light, the term configurable encompassing the range between there being no configurability at all to a configurability to a certain level of sensitivity to infrared radiation changes, is present.

7. A recessed light assembly as claimed in Claim 1, albeit without the housing canister recited in Claim 1, the resulting subassembly so designed as to fit and retain itself into a matching recessed light housing canister, the resulting subassembly further comprising:

a timer that, after a configurable period of time, the term configurable encompassing the range between there being no configurability at all to a configurability to certain number of seconds, disconnects electrical power being applied to electric lamp disclosed in Claim 1.

8. A recessed light assembly as claimed in Claim 1, albeit without the housing canister recited in Claim 1, the resulting subassembly so designed as to fit and retain itself into a matching recessed light housing canister, the resulting subassembly further comprising:

an ambient light detection mechanism that prevents electrical power from being applied to electric lamp recited in Claim 1 when a configurable amount of ambient light, the term configurable encompassing the range between there being no configurability at all to

a configurability to a certain level of sensitivity to infrared radiation changes, is present; and

a timer that, after a configurable period of time, the term configurable encompassing the range between there being no configurability at all to a configurability to certain number of seconds, disconnects electrical power being applied to electric lamp recited in Claim 1.

9. A decorative trim subassembly for a recessed light assembly adapted to use motion detector(s) tuned to detect human and/or animal motion and consequently turn the recessed light on, the decorative trim subassembly comprising:

an annular decorative trim plate (bezel) with apertures for electric lamp and motion detector mechanism, and designed to fit and retain itself in a matching recessed light assembly;

one or more motion detector(s), each disposed along an aperture in said decorative trim plate and comprising:

radiation sensors;

radiation bandwidth filtration mechanism;

means to focus radiation over radiation sensors; and

logic circuits;

electrical cabling designed to place motion detector(s) between source line voltage and electric lamp socket in the recessed light assembly.

10. A decorative trim subassembly for a recessed light assembly as claimed in Claim 9, and further comprising:

an ambient light detection mechanism that prevents electrical power from being applied to electric lamp disclosed in Claim 9 when a configurable amount of

ambient light, the term configurable encompassing the range between there being no configurability at all to a configurability to a certain level of sensitivity to infrared radiation changes, is present.

11. A decorative trim subassembly for a recessed light assembly as claimed in Claim 9, and further comprising:

a timer that, after a configurable period of time, the term configurable encompassing the range between there being no configurability at all to a configurability to certain number of seconds, disconnects electrical power being applied to electric lamp disclosed in Claim 9.

12. A decorative trim subassembly for a recessed light assembly as claimed in Claim 9, and further comprising:

an ambient light detection mechanism that prevents electrical power from being applied to electric lamp disclosed in Claim 9 when a configurable amount of ambient light, the term configurable encompassing the range between there being no configurability at all to a configurability to a certain level of sensitivity to infrared radiation changes, is present; and

a timer that, after a configurable period of time, the term configurable encompassing the range between there being no configurability at all to a configurability to certain number of seconds, disconnects electrical power being applied to electric lamp disclosed in Claim 9.

13. A decorative trim subassembly for a recessed light assembly adapted to use motion detector(s) tuned to detect human and/or animal motion and consequently turn the recessed light on, the decorative trim subassembly comprising:

an annular decorative trim plate (bezel) with apertures for electric lamp and motion detector mechanism, and

designed to fit and retain itself in a matching recessed light assembly;

one or more motion detector(s), each surface mounted on said decorative trim plate and along an aperture in said decorative trim plate and comprising:

surface mounted radiation sensors surface;

surface mounted radiation bandwidth filtration mechanism;

means to focus radiation over radiation sensors; and

logic circuit etched directly on said decorative trim;

electrical cabling designed to place motion detector(s) between source line voltage and electric lamp in the recessed light assembly.

14. A decorative trim subassembly for a recessed light assembly as claimed in Claim 13, and further comprising:

an ambient light detection mechanism that prevents electrical power from being applied to electric lamp disclosed in Claim 13 when a configurable amount of ambient light, the term configurable encompassing the range between there being no configurability at all to a configurability to a certain level of sensitivity to infrared radiation changes, is present.

15. A decorative trim subassembly for a recessed light assembly as claimed in Claim 13, and further comprising:

a timer that, after a configurable period of time, the term configurable encompassing the range between there being no configurability at all to a configurability to certain number of seconds, disconnects electrical power being applied to electric lamp disclosed in Claim 13.

16. A decorative trim subassembly for a recessed light assembly as claimed in Claim 13, and further comprising:

an ambient light detection mechanism that prevents electrical power from being applied to electric lamp disclosed in Claim 13 when a configurable amount of ambient light, the term configurable encompassing the range between there being no configurability at all to a configurability to a certain level of sensitivity to infrared radiation changes, is present; and

a timer that, after a configurable period of time, the term configurable encompassing the range between there being no configurability at all to a configurability to certain number of seconds, disconnects electrical power being applied to electric lamp disclosed in Claim 13.